



## PATENT ABSTRACTS OF JAPAN

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**G01N 22/00****G01R 27/26**(21) Application number: **06305255**(22) Date of filing: **08.12.94**(30) Priority: **08.12.93 DE 93 4342505**(71) Applicant: **NU TECH GMBH STANGE GERD**(72) Inventor: **STANGE GERD****(54) METHOD AND DEVICE FOR MEASURING  
COMPLEX DIELECTRIC CONSTANT OF  
SUBSTANCE****(57) Abstract:**

**PURPOSE:** To provide a method for measuring a complex dielectric constant of a sample and its device by evaluating detuning amount caused by presence of the sample.

**CONSTITUTION:** Two rf resonators 8 and 8' having the same structure are used, and each of the resonators 8 and 8' has dielectric solid resonators 1 and 1' in an enclosure provided with first portions 2 and 2' and second portions 3 and 3' with transmission for AC field. Both the rf resonators are placed relative to each other so that each of the first portions 2 and 2' constituted by conductors provides shield to interaction and the second portions 3 and 3' with transmission to an electromagnetic field are opposed to a substance to be measured. Resonance frequencies of the rf resonators 8 and 8' is chosen so that a common working frequency is positioned in the middle of the resonance frequencies of the rf resonators 8 and 8' when the matter to be measured does not exist.

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